



## RESEARCH AND INNOVATION

# Intelligent Robot to aid Individuals with Special Needs

An international research group at the Fachhochschule, in cooperation with partner universities, has engineered an adaptive robot. The intelligent robot is capable of seeing, hearing as well as acting autonomously. The robot has been designed to help elderly and disabled individuals in their daily routine tasks. Prompted by a speech command the robot can, for example, fetch a requested object with its mechanical hand. This technology is currently being transferred to humanoid robots.

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Research is carried out at the Laboratory for Autonomous Systems and Intelligent Sensors at the Faculty for Computer Science and Engineering. The research team consists of students from Bulgaria, China, Germany, and Romania.

## RESEARCH AND INNOVATION

# Research Project: Stentdesign for the Arteria femoralis superficialis

Patients with peripheral arterial occlusive disease run a high risk of suffering from cardio and cerebrovascular complications. In Europe and North America approximately 28 million people are affected by the condition. Every year, up to 40,000 patients in Germany are required to have legs or feet amputated. The results of balloon dilatations may be improved considerably by Stents. However, Stent manufacturers lack any objective criteria for assessing the development of forces and strains in the area of the arteria femoralis superficialis under normal everyday circumstances. The objective of this research project – co-funded by the Federal Ministry of Education and Research – is to develop Nitinol Stent systems designed to accommodate the forces and strains developing in the lower extremity.

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Dear partners and friends of the Fachhochschule Frankfurt am Main, Internationalisation drives us toward greater involvement in cooperations with partner universities and this growth in cooperations calls for better levels of transparency so that we, in turn, may better understand our partners. This is why we have created the International Fachhochschule Newsletter. It will keep you up to date with recent trends and developments regarding programmes, new projects, aspects of student life and other activities. I would be delighted if this newsletter provides an opportunity to enhance a wide variety of international interactions with your institution. Thank you for your attention and enjoy reading!

Sincerely yours

*D. Buchholz*

Dr. Detlev Buchholz

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## RESEARCH AND INNOVATION

### Successful Bid for Funds in Research on Demographic Change

Prof. Dr. Doris Bredthauer and Prof. Dr. Ilka Quindeau of the Faculty of Health and Social Work have made a successful bid for funds in research on demographic change. Each researcher has acquired around 230,000 Euros within the SILQUA (Social Innovations for quality of life of elder people) research initia-

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tive of the Federal Ministry of Education and Research. Prof. Bredthauer's research project addresses the topic of elder abuse. She will investigate the use of abusive treatment by means of physical or chemical restraints and seclusion in challenging domestic care settings. In a second step, alternative interventions will be developed and piloted. Prof. Quindeau's project will examine how to improve the situation of elderly people who suffer from traumata as a result of childhood wartime and displacement experiences. She plans to elaborate on a concept for trauma treatment which is to be implemented in pedagogy and care.

## RESEARCH AND INNOVATION

### Fachhochschule joins Initiative for House of Logistics and Mobility

The president of the Fachhochschule, Dr. Detlev Bucholz, recently signed an agreement for establishing a House of Logistics and Mobility (HoLM). HoLM is to serve as an information and

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cooperation hub for research and further education activities. The state of Hessen, the municipality of Frankfurt, Fraport AG and

the Rhein-Main public transport authority support HoLM with a starting grant of 750,000 Euros. With 18 professors devoted to the field, logistics and mobility is a focal point of research and education at the Fachhochschule already. The actual House of Logistics and Mobility will be built at Frankfurt International Airport.

More Information on the HOLM: [www.holm-frankfurt.de](http://www.holm-frankfurt.de)

## TEACHING AND LEARNING

### Fachhochschule starts Transatlantic Bachelor Programme

Thanks to the efforts of Dean Prof. Dr. Michael Hefter and his colleague Prof. Dr. Swen Schneider the Fachhochschule will be able to enrol the first cohort of students for the Transatlantic Bachelor in Business Information this fall semester. The project is one of eight proposals which have been awarded funding by the EU and FIPSE in 2008. The University of Massachusetts (Boston and Dartmouth, USA) as well as the Kemi/Tornio University of Applied Sciences (Finland) act as partners in the consortium.

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## TEACHING AND LEARNING

### Internationalisation at Home through "International Weeks"

The Faculty of Business and Law recently organised its 2nd International Week. During this week students of all programmes have access to lectures taught in English by incoming teachers from partner institutions,

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both European and overseas. The International Week not only is beneficial for students but also facilitates networking among incoming and domestic staff. Guest lecturing is accompanied by a visit to the European Central Bank and a seminar about internationalisation strategies. This year the Faculty of Health and Social Work is starting to create a similar event for their students and staff.

## TEACHING AND LEARNING

### English taught Master Programs

In keeping with its policy to increase the number of courses taught in English, the Fachhochschule currently runs three Master programmes, which are of particular interest to international students as they are designed to be taught entirely in English. These programmes are High Integrity Systems (MSc), Informa-

tion Technology (MEng) and Urban Agglomerations (MSc). Each programme covers four semesters (120 ECTS credits). The first two programmes require a computer science or an engineering degree, the latter targets primarily architecture and urban planning graduates. German is not an entry prerequisite for

the programme but special German courses can be taken upon request. Enrolment is once a year (fall semester).

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More Information on Master Programmes in English: [www.fh-frankfurt.de/en/study\\_opportunities/courses\\_in\\_english.html](http://www.fh-frankfurt.de/en/study_opportunities/courses_in_english.html)

## NEWS AND EVENTS

### Fachhochschule-Graduate granted Harvard Ph.D-Scholarship

Fachhochschule-Graduate Aylin Brigitte Yildirim has been granted a Ph.D-scholarship from Harvard University. After having graduated in architecture in 2003 Yildirim worked as a freelance architect. In 2005 Yildirim re-

turned to the Fachhochschule to graduate in the interdisciplinary Master programme "Barrier free Systems" (BaSys). Her Master thesis investigated problems of urban development in megacities with the example of Istanbul. A scholarship from the German Academic Exchange Service (DAAD) allowed her to undertake the necessary on-site fieldwork.

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More Information on the Master Programme BaSyS (German): [www.fh-basys.de](http://www.fh-basys.de)

## NEWS AND EVENTS

### Sports programmes support Successful Learning

From Badminton to Soccer and from Capoeira to Yoga: With about 100 different courses, covering more than 30 kinds of sports, the Fachhochschule sports programmes for students and staff are quite unique on a national level. Even outdoor events like sailing in the Netherlands or snowboarding in Austria are on offer. We believe

in sports as an important part of student life, thus balancing the strains of attending lectures, reading books or working on the computer. Not least, doing sports is a good opportunity for the integration of international students who come from 100 different countries in the world.

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